



**Recreation Management on the Chevelon Ranger District:
An Assessment and Conceptual Approach**

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Abstract: Recreation planning on the Chevelon Ranger District has been evolving since the 1930's. The progression and results of efforts made under various management objectives are summarized in this paper. It is the objective of this look into the past to gain an understanding of the history and development of the recreation resource on the Chevelon District so that current management will be more efficient and effective.

A second goal of this project is to take a closer look at the existing state of the recreation resource and to find what socially redeeming values are, or may be obtained from outdoor recreation on the Chevelon District. A survey is recommended to acquire this information from visitors to the various recreation settings, or Recreation Opportunity Spectrum classes, that are available on the District. Results of the recommended survey can assist current and future management to provide opportunities that will best meet the desires of the recreating public.

Key Words: Recreation Opportunity Spectrum - ROS; Benefits Based Management - BBM; Visitor Expectations; CUSTOMER; Recreation Planning

TABLE OF CONTENTS

	Page
Title	i
Abstract	ii
Contents	iii
LIST OF FIGURES	iv
LIST OF APPENDICES	v
Executive Summary	vi
CHAPTER 1: INTRODUCTION	1
CHAPTER 2: METHODOLOGY	2
Part I History	2
Part II Conceptual Recreation Planning	7
Part III Preliminary Survey	15
CHAPTER 3: ANALYSIS	16
Part I Findings	16
Part II Recommendations	40
CHAPTER 4: SUMMARY	44
Literature Cited	45
APPENDIX A	46
APPENDIX B	55
APPENDIX C	66
APPENDIX D	70
APPENDIX E	73

LIST OF FIGURES

	Page
FIGURE 1: Vicinity Map	3
FIGURE 2: District Map	4
FIGURE 3: Rim Lakes Management Area	6
FIGURE 4: ROS Map	9
FIGURE 5: Major System Roads	11
Survey Photographs 1-24	20-31

LIST OF APPENDICES

	Page
APPENDIX A: Original Recreation Planning for the Bear Canyon Lake Area	46
APPENDIX B: Environmental Assessment for Rim Lakes Management Plan	55
APPENDIX C: Recreation Opportunity Spectrum (ROS) Classification Guidelines	66
APPENDIX D: Preliminary Survey Components	70
APPENDIX E: Survey Tally Sheets	73

EXECUTIVE SUMMARY

The evolution of outdoor recreation over the past century has resulted from the increasingly complex nature of the human need for leisure. This paper takes a look at the evolutionary process of recreation management on the Chevelon Ranger District from the 1930's to today.

Initial planning efforts focused on creating several lakes to serve as recreation destinations. Once the lakes were in place, management emphasis shifted to providing amenities such as campgrounds and picnic areas. Then, as the state population and popularity of the Chevelon District increased, effort was put into maintenance, and finally into resource protection.

The attention of past planning processes was largely site oriented. The development and gradual implementation of the Recreation Opportunity Spectrum (ROS) has identified the need to offer a variety of outdoor settings in order to facilitate various experiences. The ROS tool allows recreation managers to incorporate people and their experiences with natural settings. Benefits Based Management (BBM) is yet an additional tool that allows us to get to the heart of the recreation experience with the purpose of determining what benefit a person (or society indirectly) gains from achieving the experience sought. An understanding of personal and social benefits gained from outdoor recreation will allow managers to provide or enhance experience opportunities where people can realize those benefits.

A preliminary survey was conducted on Labor Day Weekend 1993 at recreation attractions on the District. The results are discussed and recommendations made for a more specific, benefits oriented, survey.

CHAPTER I: INTRODUCTION

Outdoor recreation management is an important role for the Forest Service on the Chevelon Ranger District. This becomes most evident between the months of May and September when recreating people dominate the landscape. If you ask any of those people why they choose to visit this particular area the answers may seem vague: to relax, to take the kids camping, to enjoy nature, etc. These do seem general, but there also seems to be underlying points to such answers.

People have many basic needs that must be fulfilled to function in our complex society. When we ask people what they like about the area we manage, what we are essentially asking them is what they want or need from the time they spend at the area we manage. After all this is their free time and they have chosen to be here, obviously they expect to gain from that time in a personal way; in other words, to benefit.

The Apache-Sitgreaves Land Management Plan (LMP) statement of purpose says: "the plan provides for integrated multiple use and sustained yield of goods and services from the Forest in a way that maximizes long-term net public benefits in an environmentally sound manner."

In order to interpret issues and management direction from the LMP into "sustainable net public benefits" in terms of outdoor recreation, we must be able to identify benefits and how they are achieved. Schroeder (1993) makes the point that "if we want to understand how people are related to environments such as forests, then we need to understand how people experience these environments" and that "certain environments seem to provide 'critical habitat' for sustaining certain kinds of experiences."

The purpose of this project is to assess the current situation and to recommend a survey to identify perceived personal and social benefits of outdoor recreation on the Chevelon Ranger District.

CHAPTER II: METHODOLOGY

PART I HISTORY

Public use of National Forests for the purpose of recreation gained popularity in the early part of the 20th century as industrialization became a way of life and people started to have more free time (Driver et al. 1991). Like most of the country, Arizona had few state highways and no interstates. This meant recreation influences came from near-by communities.

In the case of the Chevelon Ranger District (Figures 1 and 2) the earliest recreation visitors came from Winslow and Holbrook, communities to the north where access is not geographically limited by the Mogollon Rim. During the 1930's and 1940's Roosevelt's Civilian Conservation Core (CCC) built many recreation facilities on the National Forests including a small campground at Chevelon Crossing on the north end of the District. At that time, recreation planning at the District level was non-existent and recreation as a 'resource' was not to be recognized for a few more years.

In the mid 1950's large scale planning to provide recreation on the Mogollon Rim was undertaken by the Forest Service and the Arizona Game and Fish Commission. Several impoundments were planned for the purpose of providing recreation destinations for a growing state population. This planning effort focused on developing recreation facilities in proximity to the new lakes as well. Appendix A provides an example of original plans for one of the lakes.

The actions and intentions of the two agencies was admirable and had far reaching impacts. But as time progressed to the 1970's and 1980's, the foresight of those early plans came to a close. Many of the proposed development plans never came to fruition, but the lakes were developed and served their purpose well as recreation attractions.

In the mid 1980's the Forest Service recognized the need to implement an intensive recreation management regime on the Mogollon Rim to gain control of resource damage resulting from

ARIZONA



Figure 1 Vicinity Map

CHEVELON RANGER DISTRICT
SITGREAVES NATIONAL FOREST

ARIZONA

1972

Scale



LEGEND

 Ranger District Boundary

National Forest Land

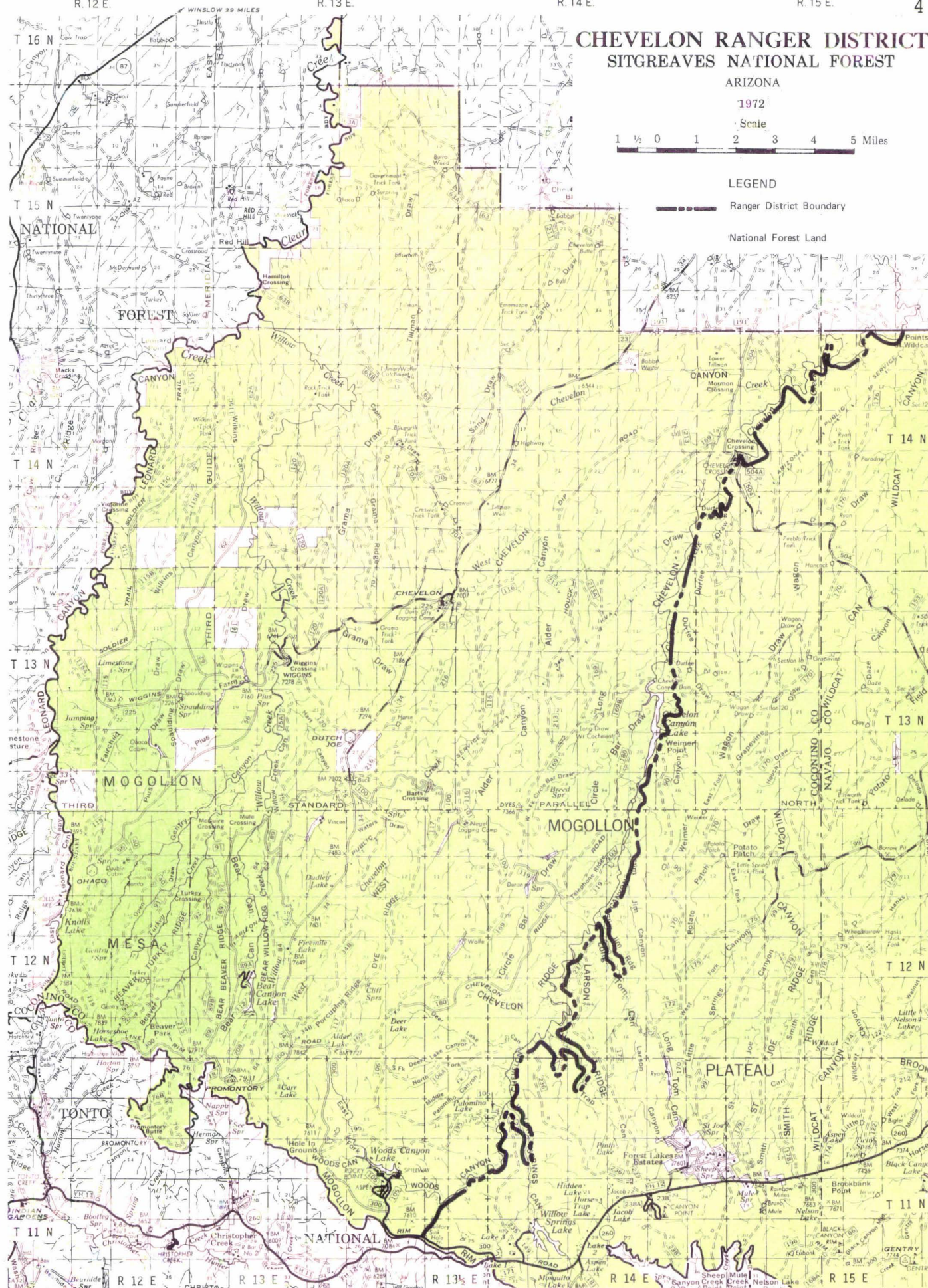


Figure 2 District Map

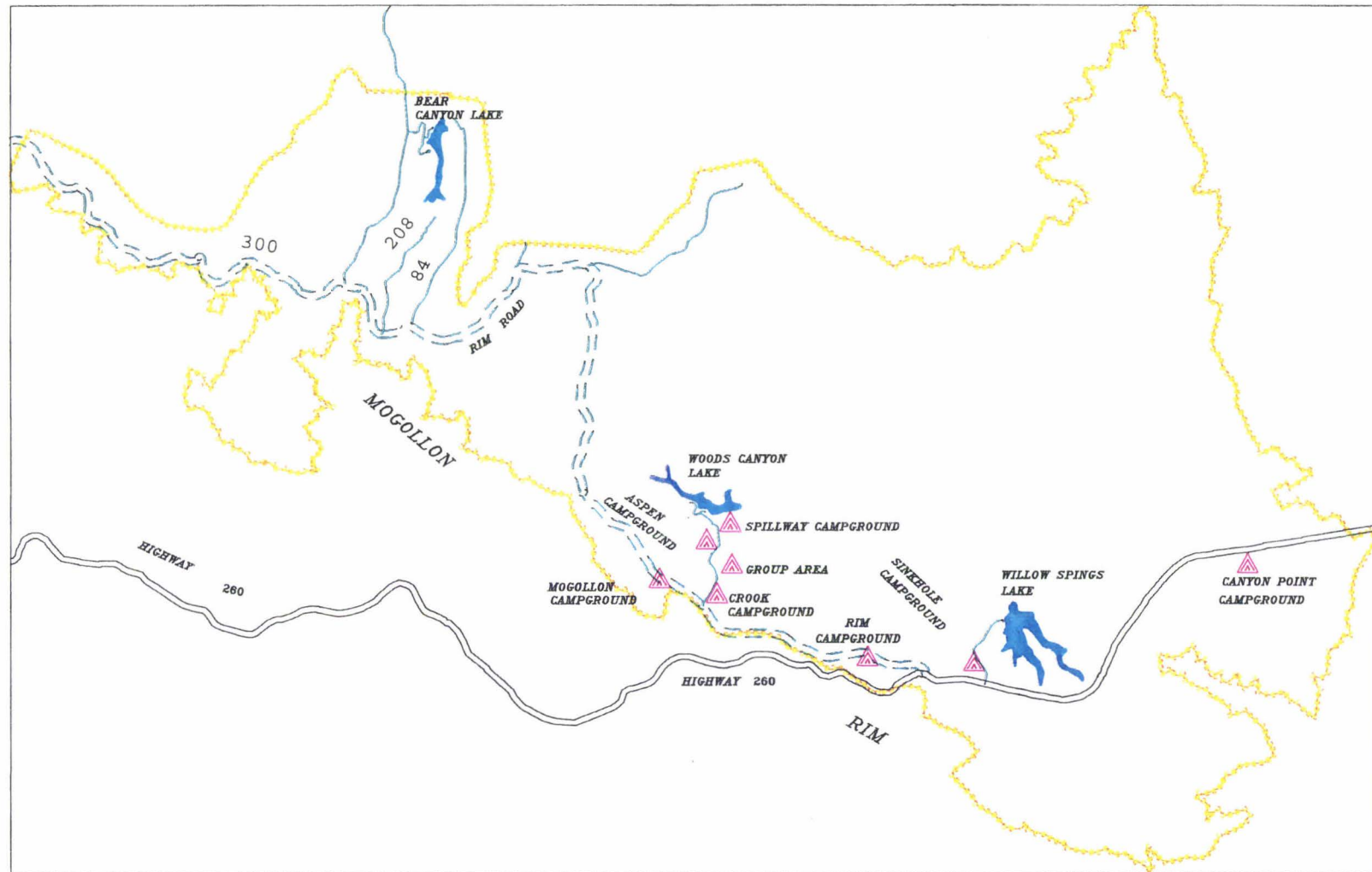
over use. The Rim Lakes Management Plan (RLMP) was put into effect in 1987.

The Rim Lakes Management Area encompasses the Apache-Sitgreaves portion of the Mogollon Rim with approximately 2/3 of the unit on the Chevelon Ranger District and 1/3 on the Heber Ranger District (Figure 3). This plan implemented a system of 'designated dispersed' camping, set aside large areas for non-motorized use, limited some areas to day-use, and increased the number of developed sites in areas where development had already occurred (Appendix B). The RLMP was remarkably well received by area visitors and had astounding positive results in terms of vegetation revitalization and wildlife utilization.

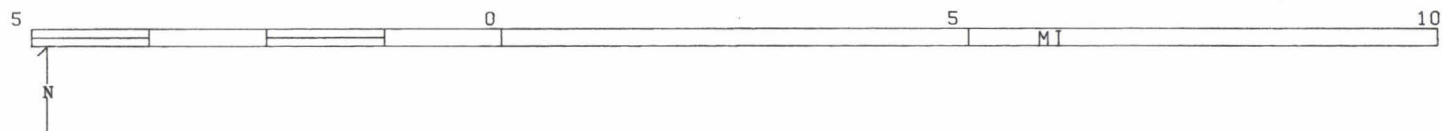
Although this plan appears to have solved many conflicts in the Rim area, it only addresses recreation from a crisis management stand point and does not discuss the quality of the recreation experience or the impacts of displaced recreation use on adjacent areas. As a result, the Chevelon Ranger District has experienced an increase in recreation use in areas not limited by the stipulations of the RLMP.

Planning that encompasses the entire District identifying what recreation experience opportunities we can and should target is the next step: A conceptual approach based on Forest Plan direction, Recreation Opportunity Spectrum (ROS), and access. Planning of this nature considers the present state of recreation attractions, defines the nature of the attraction, determines if it is appropriate in terms of 'sustained net public benefits', and how the desired setting can be achieved or enhanced.

RIM LAKES MANAGEMENT AREA



SCALE 1: 120000.



PART II CONCEPTUAL RECREATION PLANNING

In order to visualize what benefits of outdoor recreation can be gained from a given area, it is important to describe that area by factors of major influence. The LMP gives general direction for future needs and recommendations for analyses of potential projects in specific areas. The LMP also states that ROS should be addressed in general terms of overall acreage; in this type of planning ROS is used as site specific tool in addition to the overall consideration of total acreage in each class. The ROS provides descriptions of various criteria including 'remoteness' that consider distance from roads, however, for the purpose of this type of planning 'access' addresses road standards and distances from population centers and is, therefore, discussed in addition to ROS.

USE OF LMP

The Land Management Plan is intended to provide direction and guidance for implementing proposed Forest Service actions over a ten to fifteen year period. The Apache-Sitgreaves LMP was published in 1987 and since has had three amendments. The LMP provides general issue and direction statements on the subject of outdoor recreation which include:

- 1) Issue - "The demand for developed recreation sites exceeds the availability of improvements, particularly around lakes and along streams."
- 2) Issue - "Transportation system standards and maintenance do not always accommodate the wide range of vehicles such as motorhomes, camp trailers, logging trucks, and automobiles that travel the roads."
- 3) Direction - "Manage the recreation resource for a wide variety of developed and dispersed experiences. Provide for developed sites and dispersed visitor use ... Maintain and enhance visual resource values by including visual quality objectives in resource planning and management activities ... continue to integrate the ROS system into the Forest planning process to quantify recreation opportunity changes, guide forest management and coordinate recreation with other resources."

In short, the LMP directs resource managers to provide a range of experience opportunities with appropriate access to those destinations.

USE OF ROS

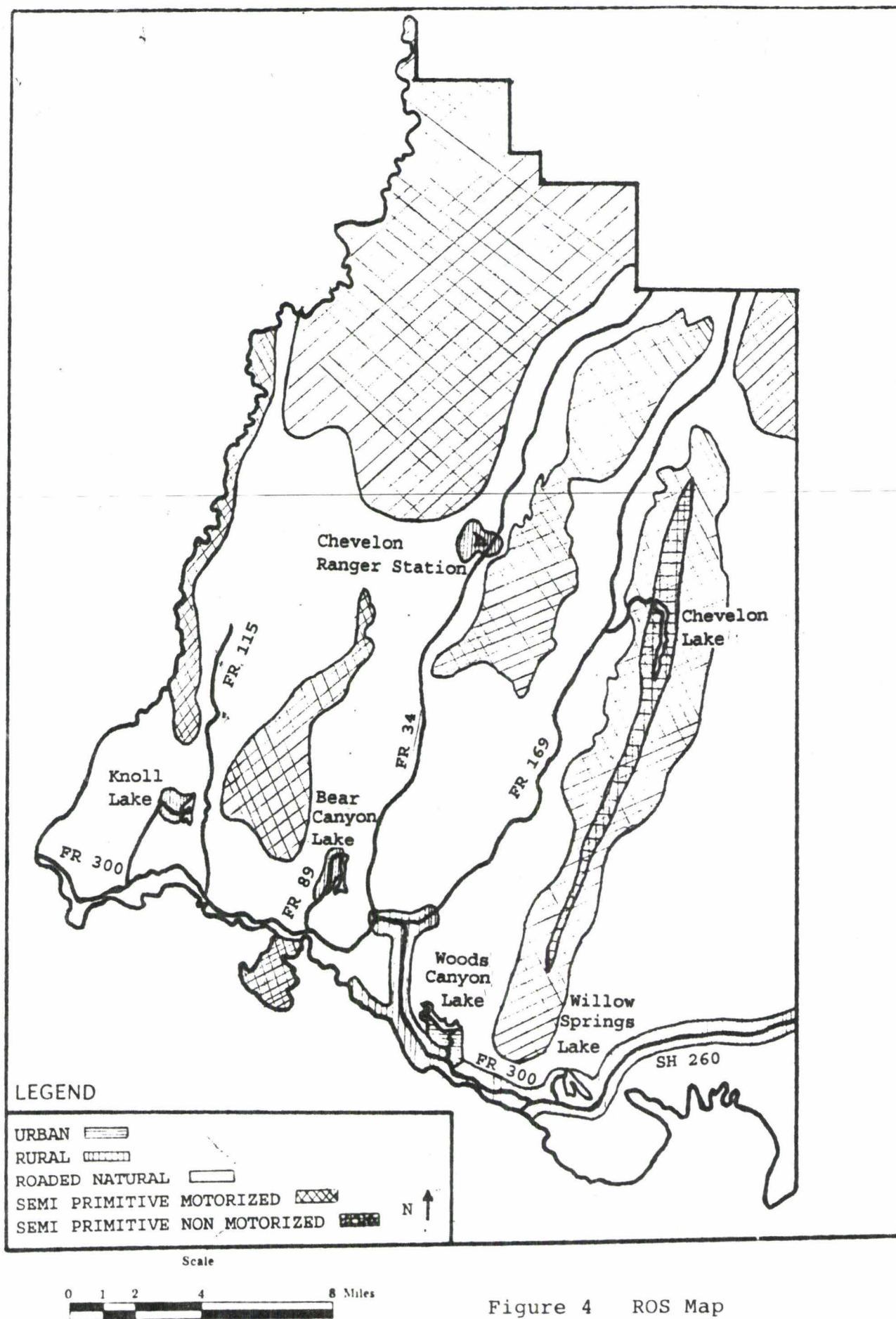
Because recreation use is not bound biologically by natural resources, true 'carrying capacity' cannot be defined for outdoor recreation. It is, therefore, up to the management agency to identify an acceptable capacity for a given area. These terms are defined according to the type of experience and social setting targeted. For example, the experience and social setting targeted for an outdoor activity such as water skiing has a higher level of social encounters expected by the participant than does an activity such as fishing in a lake restricted to artificial lures and flies.

The Forest Service employs ROS classifications to set the limits for development, social atmosphere, and modification of the natural environment. This system is admittedly subjective, however, the classes are assigned general guidelines and ranges of acceptable situations for the various criteria that collectively amount to outdoor settings. These classifications include: Primitive (P), Semi-Primitive Non-Motorized (SPNM), Semi-Primitive Motorized (SPM), Roaded Natural (RN), Rural (R), and Urban (U) (USDA Forest Service 1986) (Appendix C).

Current ROS classifications on the Chevelon Ranger District (Figure 4) include:

Woods Canyon	R to U
Designated Dispersed	RN to R
Bear Canyon	RN to R
Chevelon Canyon	SPM
Chevelon Crossing	SPM.

The range of classes indicates the difference between weekday and weekend use during the peak season from the context of social encounters.



USE OF ACCESS

In addition to LMP direction and ROS classification, access is an influencing factor on recreation experience opportunities. Proximity to residence and road standards are often limiting criteria when choosing recreation destinations. These limitations result in more significant impacts on recreation sites that are within close proximity to population centers, or that have good access roads. Figure 5 illustrates the major system roads on the District.

STATUS OF RECREATION ATTRACTIONS ON THE CHEVELON RANGER DISTRICT

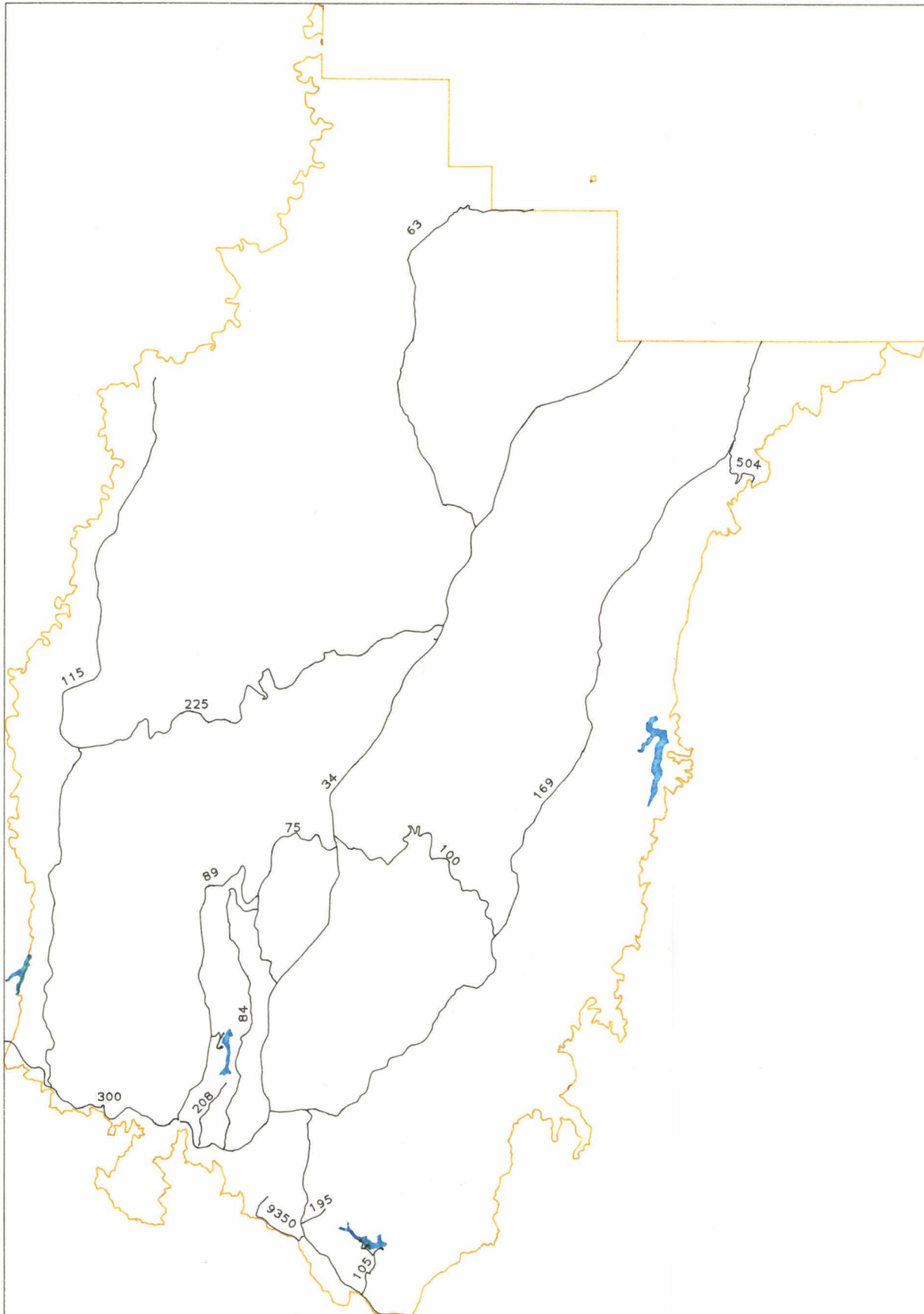
WOODS CANYON COMPLEX

Woods Canyon is by far the most developed of the Rim lakes. Paved access to the shoreline and the store are typical of the character in this area. This 52 acre lake is one mile from a scenic Rim vista and only four paved miles from SR 260. This location, along with cool summer temperatures, makes Woods Canyon Lake the most popular recreation destination in the state on a per acre basis. Among the amenities of this urban area are potable water, paved campground roads, a network of trails, a lakeside picnic area, chemical and vault toilets, an amphitheater, boat rentals, an RV dump station, and the most frequently stocked waters on the Mogollon Rim. Soon to be added to the amenities are a 21 KV powerline, and a new water system. These will allow select campsites to have power for RV hook-up, and free the Woods Canyon Lake Store of the noisy generator necessary for operation.

In June of 1993, as a result of LMP direction, the District completed an environmental analysis to determine if more developed campsites should be added to the Woods Canyon Complex. A decision was made to modify the existing Cul-de-Sac campgrounds and that no more than twenty-six additional sites be developed. This decision was made in order to enhance the social setting

Major System Roads

11



SCALE 1: 220000.

5 0 5 1

MI



by modifying existing campgrounds, and to maintain the level of use in this area because the current scale of development is at or near capacity relative to the size of the lake.

DESIGNATED DISPERSED

Implementation of the RLMP began a system of designated dispersed camping in the Rim Lakes Management Unit. Sites are designated by numbered signs along a road corridor with a "camp here" sign associated with the number. The party camps within 50 feet of the camp here sign, as directed by informational signs when entering the area. Lack of development and services, as well as distance between sites creates a Roaded Natural to Rural setting. Generally speaking, the ROS of these sites is Roaded Natural, but sites along Forest Road (FR) 300 are subject to continuous daytime traffic on weekends.

Currently all designated dispersed campsites are within four miles of the Woods Canyon Complex to the west. Forest Road 300, with a double lane paved standard for four miles and double lane aggregate standard to designated dispersed areas, is the main access route to these sites. The LMP gives direction to designate more sites every year. The Chevelon Ranger District presently has 100 sites.

Designated sites fill up on weekends in the summer. Parties camping in the designated dispersed sites include those that could not find a developed site, those that do not want to pay for a developed site, and those that have become traditional users of these sites.

BEAR CANYON

Bear Canyon Lake is located 16 miles west of SR 260 about three miles from the edge of the Mogollon Rim at an elevation of 7,700 feet. While access can be had from the north and east, most visitors enter from the west on FR 89, a single lane aggregate surfaced road. This 65 surface acre, lures and flies

only lake is nestled in a steep canyon and may be reached by several trails. Though the average length is only half a mile, these trails offer quite a hiking challenge to people from lower elevations. The day-use shoreline is not accessible to motor vehicles.

The west side of the lake is frequented by enough people on weekends in the summer to create a Rural ROS class from social encounters alone. This area is a traditional throw down spot and is the most popular area associated with Bear Canyon. The west side receives the heaviest amount of use because signs and maps easily direct visitors to that location, while other access routes are left somewhat discrete. Two chemical toilets in the throw down area, and a vault toilet in each of the two paved parking areas are the only facilities on the west side of the lake.

The south side of Bear Canyon may be reached via FR 208. This end of the lake is commonly used by large groups. Dispersed camping by groups of one to ten people is becoming more and more popular in this area. No facilities are offered at this site.

A borrow pit, on the east side of Bear Canyon allows access from FR 84. This side of the lake is used by many anglers to carry their boats to the lake on a gated gravel road used by the Arizona Game and Fish stock truck; this is the only vehicle access to the shoreline and is used exclusively for stocking the lake. Again, camping here is undeveloped with the exception of one toilet near the dam.

LMP direction for the Bear Canyon area is to analyze the possibility of constructing developed camping facilities. An environmental analysis is currently under way.

CHEVELON CANYON

Chevelon Canyon is the most remote feature on the District. It has recently been nominated as a wild and scenic river because of its outstandingly remarkable scenic, wildlife, and cultural

values. All parts of the canyon attract recreation use, but Chevelon Lake and Chevelon Crossing are the most popular sites.

Two hundred surface acre Chevelon Canyon Lake maintains a hearty character that allows access by a hike of at least one mile along several steep trails. The warmer waters of this remote artificial lures and flies lake makes it a favorite for anglers that are out for big trout. Dispersed camping occurs at all of the trailheads.

Chevelon Crossing is located on FR 504 on the north end of the District. A one lane bridge crosses Chevelon Creek next to an eight unit CCC campground. Camping is not restricted to those sites, but is limited by the steepness of the canyon. Toilets, picnic tables, and fire pits are available at this location.

The ROS classification for Chevelon Crossing is Semi-Primitive Motorized. This site is one of the most remote recreation destinations on the District that is accessible by vehicle. The road is maintained on a regular basis, but is constructed on sandstone which makes it very rough in places where the surface material is thin or gone.

The LMP has identified Chevelon Canyon as a special management area from the canyon head to the Forest Boundary. Management direction is to "emphasize SPNM recreation opportunities for solitude" and to "protect the high scenic values, and maintain the current wildlife habitat values."

PART III PRELIMINARY SURVEY

In anticipation of attending the Clemson Short Course, a visitor survey was conducted on Labor Day Weekend (1993). District personnel conducted the survey which concentrated on major recreation attractions (listed on page 8) and included: (1) a six question on-the-spot, open ended, response form, and (2) disposable cameras with associated photo logs (Appendix D). Seventeen cameras, which were asked to be returned to the visitor information center, and 59 on-the-spot response forms were passed out.

The questions asked people what they liked and did not like about the area in which the survey took place. The purpose was to get a better understanding of what attracts people to different outdoor settings, if reasons vary in relation to ROS classification, and what District visitors feel are detractions from the survey locations. This survey was an attempt to check the pulse of the public and determine if our management approach is on track with the desires and expectations of our customers.

CHAPTER III: ANALYSIS

PART I FINDINGS

The survey conducted on Labor Day Weekend did not employ the scientific method and interpretation of the comments is intended only to provide general descriptions of what people like and dislike about the survey area. Survey tally sheets are provided in Appendix E.

ON-THE-SPOT SURVEY

Overall, the number one reason people gave for liking the locations where the surveys took place was "cool weather." This is not surprising since most District visitors come from the Phoenix metropolitan area where average summer high temperatures soar between 100 and 105 degrees Farenheit (USDC National Weather Service 1994).

Other commonly mentioned reasons people expressed for liking the area include: trees, proximity to residence, facilities, scenic beauty, lakes, quiet/solitude, wildlife, cleanness of area, and remoteness.

The reasons most mentioned for not liking the survey locations were "crowds" and "shooting." Complaints about crowding also come as no surprise. The combination of cooler weather, proximity to Phoenix, and water-based recreation amount to the perfect recipe for crowds. In fact, the Arizona Department of Transportation (ADOT) reports that the average summer traffic rate turning off SR 260 on FR 300 was at 500 vehicles per day in 1991 (Strange 1994). ADOT estimates that the average traffic count in the year 2000 will be 1,400 vehicles per day in this same location (Strange 1994).

Target shooting occurs frequently in dispersed areas, including 'designated' dispersed areas. This is particularly disturbing to people because of the danger involved with not knowing where bullets are flying, and the loudness of the activity.

Additional reasons people commonly mentioned as undesirable characteristics, or what they did not like about the area include: no flush toilets, too few water spigots, not enough camp sites, not easy to get a site, dogs, trash, and bad roads.

CORRELATIONS

Survey results yielded three apparent correlations of expectations and perceptions regarding survey location.

First, in the Woods Canyon Complex (developed sites), the sense of crowding was expressed most often by people staying in the Cul-de-Sac campgrounds. These campgrounds were constructed with limited funds as a result of the RLMP. Sites in the Cul-de-Sac campgrounds are arranged in the center and along the perimeter of two circular loops. This design provides little distance between campsites on the perimeter, and no distance between the sites in the center. So when the campground is full, it is indeed crowded.

Second, people had a higher expectation for amenities, such as flush toilets and water spigots, in the developed sites than in other areas.

Finally, there seems to be a relationship between the frequency in which a person visits the area and the perception of crowding. More observations of crowding were noted by people who are long time visitors to the area and are perhaps more in tune with the surroundings.

This survey also lends support to the notion that people seek recreation experiences in a variety of outdoor settings, or ROS classes, for a variety of reasons. For instance, the largest percent of responses from the Woods Canyon Complex (Rural to Urban class) state that what they like about the area, aside from "cool weather", is the convenience of facilities such as potable water, trash bins, dump station, and store; while in the same location the largest percent of responses state what they do not like is a lack of these type of facilities. In contrast, on the more primitive end of recreation settings, people made no mention of facilities/amenities at all. Survey

response forms completed at Chevelon Lake (SPNM), for example, overwhelmingly mentioned the reason for liking the area was for "quiet" or "solitude."

PROBLEMS WITH THE SURVEY

In a survey such as this there is room for a lot of bias. District employees administered the survey which is an inherent flaw. People that are very familiar with an area harbor opinions and other preconceived feelings that may inadvertently be passed along to the people taking the survey.

In addition, the open-ended nature of the survey may have elicited more positive comments. Verbal comments were often more critical and expressed more negative observations than the written survey responses. This may be a result of people not wanting to be rude. For example, a conversation with a person who had written only positive statements revealed that there had been several negative experiences with regard to the topics covered by the survey questions. As a result of not having had conversations with all survey participants, conclusions cannot be made accurately.

CAMERAS AND PHOTO LOGS

Of the 17 cameras passed out, 10 were returned and 183 prints were developed. The following pages include some of those prints and the associated captions included with the photo log. Prints were selected from each survey location that were representative of the majority of photos taken.

Photos 1-8 were taken in the Woods Canyon Complex, 9-14 in designated dispersed areas, 15-18 in the Bear Canyon area, and 20-24 in various parts of Chevelon Canyon. These photos allow us to interpret to some degree what people are seeking from and outdoor experience, and what gets in the way of a positive experience:

- Photo # 1 (P1) indicates the reason for going to the lake is to go fishing or to relax;
- In P2 and P10, we may determine that established spaces reduce

crowding and increase privacy which makes the experience more pleasant;

- P3 can tell us that people may like things that we think they would not like;
- Photos 4, 13, 14, 17, 20, 21, 22, and 24 indicate that people enjoy nature and find beauty in a variety of ROS classes;
- P5 and P11 may let us know that information and assistance from Forest Service personnel makes people comfortable;
- P6 shows us how poor design or planning can hinder the experience;
- P7 on the other hand is praise for a good design;
- P8 and P19 indicate the benefit of good times with friends and family;
- P9 lets us know this person had a higher road standard in mind for this area;
- P12, P15 and P16 indicate an appreciation for regulations and the disappointment in those who disregard them;
- P18 is also indicative of an appreciation for regulations because it allows for quiet and solitude.

WOODS CANYON COMPLEX

1.



"Good - A place to fish or come relax"

2.



"Good - A designated place to picnic"

3.



"Good - Channel 10 newscaster"

4.



"Good - babbling brook and green meadow"

5.



"Good - Ranger Bob gave excellent knowledgeable tour"

6.



"Bad - Move the rocks near tables for safety"

7.



"Good - like the fire pits, better than the cement ones"

8.



"Good - recreational game of horseshoes"

DESIGNATED DISPERSED

9.



"Bad - The road is very rocky, really bad"

10.



"Good - numbered spots"

11.



"Good - Kirk Frost has a good rapport with people very helpful and concerned with everyone here"

12.



"Bad - litter left by people, we wish we could do more about these people"

13.



"Good - abundant wildlife in the area"

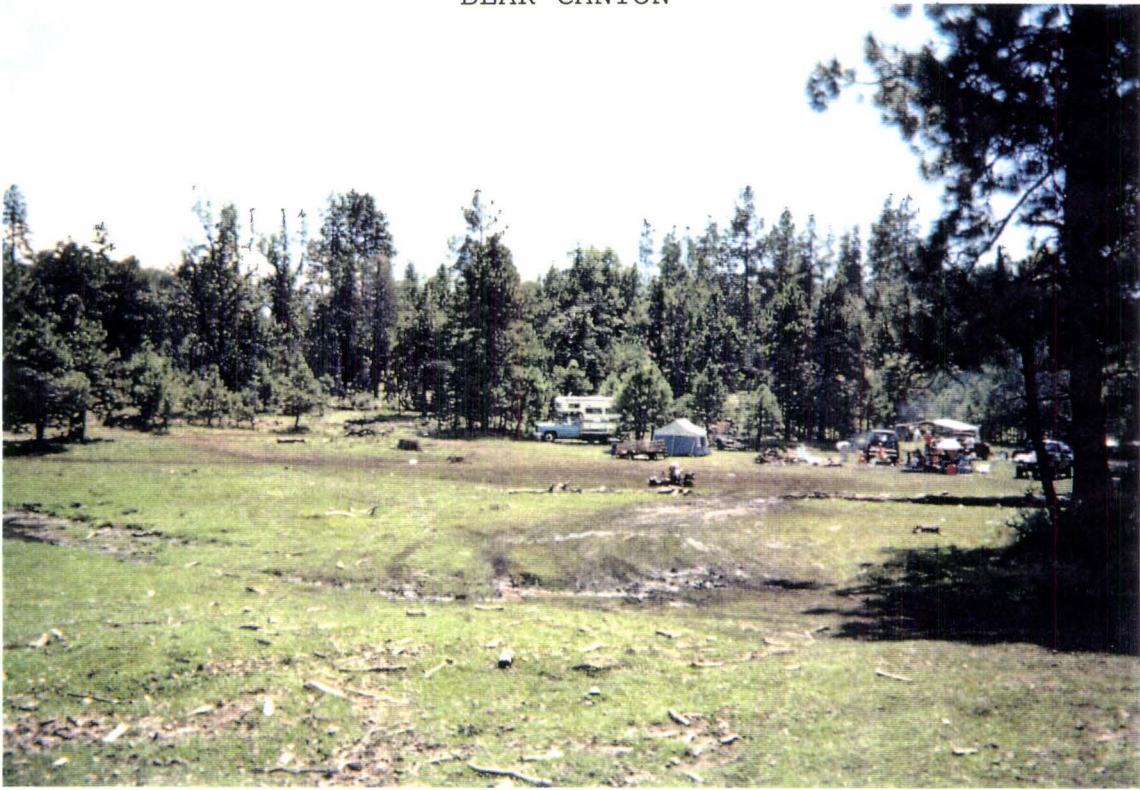
14.



"Good - beautiful scenery from top of the Rim"

BEAR CANYON

15.



"Bad - motorized travel off numbered roads!"

16.



"Bad - shotgun shells - Boo Hiss"

17.



"Good - Great horney toads!"

18.



"Good - no motors on lake"

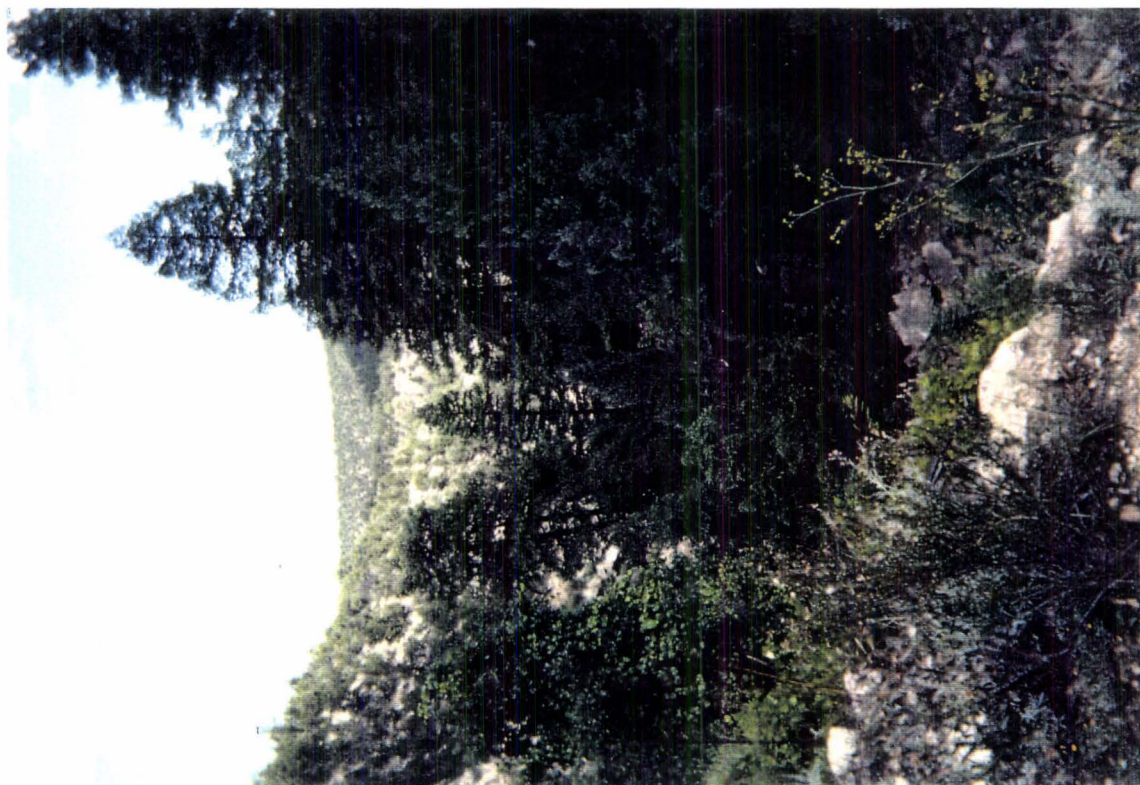
CHEVELON CANYON

19.



"Good - camping with friends"

20.



"Good - very pretty"

21.



"Good - nature"

22.



"Good - the views"

23.



"Good - family getting together"

24.



"Good - nature"

ASSESSMENT OF THE EXISTING CONDITION

A recreation strategy intended to achieve sustained experience opportunities over a range of ROS classes must consider several factors. First, the nature of the recreation attraction should be identified by defining what draws people to a particular location. Second, consider the present condition of the site and identify the targeted social environment. Then determine if the present condition is consistent with what is desired (recognition of architectural theme is a key factor in this step). Third, decide if the current setting is appropriate in that particular location and if it will achieve the overall goal of sustained experience opportunities. Hultsman et al. (1987) point out that "purpose and clientele" should determine planning criteria and design considerations. Finally, determine what management practices can be used to achieve or enhance the desired environment.

The RLMP has identified a high-use recreation area along the Mogollon Rim and has effectively focused recreation use to several attractions within the unit including: Rim vistas, the Woods Canyon Complex, designated dispersed camping, and Bear Canyon Lake. Outside of the Rim Lakes Management Area the recreation attractions are Chevelon Lake and Chevelon Crossing, both in Chevelon Canyon.

RIM VISTAS

People are drawn to the cool pines of the Mogollon Rim to enjoy spectacular views of the Tonto Basin and its surrounding mountains. Designated vista points provide parking areas where people can get out of their vehicles and take a stroll along the scenic Rim Lakes Vista Trail (RLVT).

These vista points are in a highly used area within two miles of Woods Canyon Lake where the ROS classification fluctuates from Rural to Urban. Parking areas are gravel and each has one paved spot for disabled users. The trail is approximately three feet wide and has part gravel and part paved surfacing.

The present level of use is appropriate given proximity to SR 260 and Woods Canyon Lake, however, the present condition of the trail and parking areas does not meet the level of accessibility that should be provided. The Architectural Barriers Act (ABA) of 1968 required government agencies to "insure whenever possible that physically handicapped persons have ready access to and, use of, buildings [and facilities]." The Forest Service Design Guide for Accessible Outdoor Recreation (draft 1992) gives guidance for levels of accessibility at recreation sites based on ROS.

In the case of the RLVT, the Design Guide recommends "easy access; firm, hard surface with light texture and slip resistant; maximum widths (48 inches one way, 72 inches two ways), flat to easy slopes (2% cross slope, 5% running slope), defined edges, frequent stops/rest areas (level); no obstacles."

The District has been working on extending and improving this trail for the past few years. However, with full funding not available and guidelines for accessibility having only been drafted recently (1992) the trail progressed in a patch-work method. This fiscal year, a Challenge Cost Share proposal will be submitted to the a state agency that has Arizona Lottery money available for trail construction and enhancement. Hopefully the partnership will be able to complete the work.

WOODS CANYON COMPLEX

Water based recreation and cool summer temperatures always draws a crowd in the arid Southwest. The Woods Canyon Lake area is readily accessible by vehicle and offers developed camping services, a store, a picnic area, and interpretive programs. In addition, fishing regulations are less restrictive than other lakes on the District which is attractive to people who want to catch their limit.

Most of the facilities at Woods Canyon were constructed during the mid to late 1960's after completion of the dam. They are typical of traditional Forest Service campgrounds with facilities constructed of native rock, round logs, and rustic

red-brown stained wood. They are also typical of traditional Forest Service campgrounds in that they were constructed during a period when recreation was relatively new to this agency and designing campgrounds was done mostly by engineers familiar with timber sale road construction; often creating a technically practical campground, but not always creating a campground that is optimum for the intended recreation activities (Hultsman et al. 1987).

The water system, restroom facilities, and many of the picnic tables and grills are in need of repair, retrofit, or replacement. The water system operates by pumping filtered lake water into a holding tank where it reaches some campgrounds by gravity feed. The Cul-de-Sac campgrounds (the newest) have water trailers instead of water line because the cost of laying pipe in the almost solid rock surface material is exorbitant.

A design narrative has recently been completed for the Woods Canyon Complex. Its purpose is to describe in detail the objectives for the site, the number and types of facilities to be constructed and the development (UDSA Forest Service 1991). Identified in the narrative are construction and reconstruction projects with emphasis on priority including: grid power installation; water system, parking lot, and individual site rehabilitation; sewage system upgrade; trail reconstruction; toilet/shower building construction; and details on recent environmental analysis decisions (Martin 1993). All items discussed in the design narrative address the appropriate level of accessibility.

It is important to recognize limitations when considering how to improve a site. Campground placement and design within the Woods Canyon Complex cannot be changed because it is not financially feasible. We can, however, choose not to implement actions that would further hinder the recreation experience in this area.

Hultsman et al. (1987) raise an interesting point about the clientele we serve with this statement: "Wilderness camping may have a more romantic appeal and receive more press in both

public and professional literature, but it is simply not the experience sought by most campers." The facilities in the Woods Canyon Complex offer what the majority of campers are seeking, "modernized, developed-site campgrounds" (Hultsman et al. 1987).

DESIGNATED DISPERSED

A high demand for campsites, developed and otherwise, exists along the Rim. As developed campgrounds fill to capacity, people begin looking for alternatives. Designated Dispersed (DD) sites are a popular choice for many reasons: they are in close proximity to lakes in the area, there is no fee associated with camping, and the sites are numbered. Visitors seem to be particularly glad that the sites are 'designated' because it provides space between camps, and the associated numbers give them a reference point for finding their site.

DD sites are located on Forest Roads 9350, 195, and 300. The 9350 and 195 roads are very good locations for these sites because they are both dead-end roads. The 300 road (Rim Road) however, is not a very good location. Sites on this road are subject to dust and noise from the heavy traffic on this main road across the Rim.

Due to the nature of this well traveled road, it is important to consider the visual quality of its corridor. Camp sites with laundry lines and garbage sacks hanging from tree limbs are a profound detraction from the scenic quality.

In 1992 a vault toilet, constructed of split-face block, and four metal horse corrals were placed near the General Crook Trail at the entrance of the 9350 road to accommodate campers and horses in the area. In retrospect, there are two reasons that placement of these facilities in that location was not the best way to serve the public: (1) the linear nature of site placement along the road does not provide for optimum utilization of the toilet, and (2) the corrals are not close enough to any of the designated sites to allow the owner of the horses to feel comfortable leaving their stock alone.

Furthermore, the cement-gray of the split-face block does not blend in well with the natural colors of the area and this construction is unlike any of the other facilities on the District. The corrals were installed to facilitate equestrian use on the trail, but horse riding seldom occurs on this part of the District because of the high volume of traffic.

Providing no-fee camping in a natural appearing setting is important because a large percentage of the public expects those opportunities on their National Forests. DD sites offer that opportunity, but we must keep in mind what the characteristics of a 'natural appearing' setting are, and the appropriate amenities for such a setting. The current DD sites are in both Roaded Natural and Rural ROS classes. Removing DD sites from the 300 road and designating new ones on other collector roads will provide that natural setting while enhancing the visual corridor of the Rim Road. Maintaining and developing DD sites in areas with an ROS class of Roaded Natural or more primitive will meet our objective.

Additional toilets in these areas should be given a very low priority on the capital improvements list and the necessity of them in most DD areas should be questioned altogether. If the majority of sites will be too far away to utilize the facility it will not serve its intended purpose.

BEAR CANYON LAKE AND SURROUNDING AREA

Water based recreation is also the main reason people are attracted to the Bear Canyon area. This location is undeveloped with the exception of a few toilets (page 13), but despite a lack of amenities, it is a very popular part of the District. Within the boundary of the Rim Lakes Management Area, Bear Canyon receives moderate to heavy use on all three roads that surround it (Forest Roads 89, 208, and 84).

Designating dispersed sites in the RLMA started just outside the Woods Canyon Complex and progresses toward the west, but has not reached the Bear Canyon area yet. Lack of designated sites combined with no developed campsites or site-specific

regulations has resulted in making Bear Canyon somewhat of an overflow area on the Rim. If a site cannot be found at Woods Canyon or in the DD areas people often choose to camp at Bear Canyon. People also choose to recreate at Bear Canyon because there is no fee for camping, because ATV riding is permitted nearby, and because there is no development.

The combined reasons for use, and lack of regulation have resulted in obvious resource damage. The soil in the throw down area on the west side of the lake is badly compacted and 'roads' have been forged to every place a tent can be pitched.

The social environment is less than desirable as well. Conflicting uses result in users with conflicts. With a lack of constant regulation, such as a campground host, this situation will not likely change.

These observations are not new or limited to recreation personnel. The LMP has identified the need for more developed camping and has given direction to analyze the Bear Canyon area for potential development of a campground. Scoping for this analysis has been completed and includes two full field seasons of public comment from visitors to the Bear Canyon area. The results indicate that people generally prefer some type of development/amenities or limited regulation.

The proposed action for the analysis states: Develop 100 to 200 single and multiple family camp units, toilets, showers, tables, fire pits and grills, potable water system, gray water treatment system, and an amphitheater/interpretive facility. Results of written responses to this proposal are: no action 25%; proposed action 31%; development smaller than proposed action 21%; designated dispersed 3%; development larger than proposed action 1%; well spaced development 5%; no opinion 14%.

Bear Canyon is approximately 16 miles from SR 260 on the Rim Road. The first four miles off the highway are paved and the remainder is double lane aggregate. An analysis currently under way to determine the future standard of the Rim Road will be completed this year. The outcome of this analysis has direct bearing on the future of the recreation setting and experience

at Bear Canyon because the Rim Road directly influences access to this site.

At any rate, construction of campground facilities on the west side of Bear Canyon seems inevitable. But, not only is it a question of when development will occur, it is a question of how to design the facilities and for whom to design them.

Hultsman et al. (1987) discuss aspects of campground design that influence visitor comfort and satisfaction in Planning Parks for People. In this book, a planning technique termed "design psychology" is defined as the "attention given to interplay of color, texture, form, and line." It is a method for creating a comfortable atmosphere for people using visual variety and welcoming shapes while achieving functional utility. This technique includes blending human-made with natural colors, designing to avoid confusion, designing facilities compatible with adjacent uses, and designing to human scale.

Lack of development in the Bear Canyon area essentially gives us a blank slate to work with. In this instance we have the opportunity to develop camping facilities that can offer visitors a setting they prefer, rather than simply offering a campsite. By paying close attention to what visitors are seeking (i.e. scoping results from area environmental analyses) and by providing the appropriate architectural scale that blends well with the natural setting, we can create an ambiance associated with Bear Canyon as well as a developed campground.

A well designed campground with facilities that blend with natural colors and textures, versus a campground designed with little or no attention to these components is analogous to eating in a quaint restaurant with character and hospitality, and eating at a fast food restaurant. What well planned design achieves is a feeling or atmosphere, Hultsman et al. (1987) conclude that the "effects created through the use of design psychology are so subtle that the typical visitor will rarely perceive the techniques used to enhance the environment", and that "the effects created by designs are felt by the subconscious mind."

Campground construction at Bear Canyon will not happen for several years because other Forest priorities take precedence. This brings up two points: (1) what to do in the interim, and (2) what to do with displaced campers once a campground is in place. The Rim Lakes Management Plan provides for implementation of DD sites throughout the management unit. Designating dispersed sites on the 89, 89A, 208, and 84 roads will control resource damage, enhance the social environment, and maintain the ROS class at Roaded Natural on all of these roads. Expanding the management area boundary and designating additional dispersed sites in the Bear Canyon area will be necessary to accommodate displaced campers and maintain the ROS class, on the west side of the lake both before and after a campground is in place.

CHEVELON LAKE

The trophy fisheries and remoteness of Chevelon Canyon Lake attract true fishermen and people seeking a more primitive recreational experience. Leading into the lake are the 180 and 169B roads. The 169B road was used to construct the dam and is now barricaded at the top of the canyon with a metal gate. Dispersed camping occurs at the end of both roads. No camping facilities are provided with the exception of an old pit toilet at the end of the 169B road.

Land Management Plan emphasis to provide "SPNM recreation opportunities for solitude" in Chevelon Canyon, combined with the District management goal of diversity in ROS classes are consistent with the current social environment and level of access. Roads receive occasional spot surfacing, but no regular maintenance. This is done intentionally in order to maintain the remote character of Chevelon Lake.

The setting in this area can be enhanced by barricading the old road to the dam with natural materials and getting rid of the pit toilet.

CHEVELON CROSSING

The CCC constructed facilities for the small campground at Chevelon Crossing to serve the communities of Winslow and Holbrook. Being quite a distance to travel on dirt roads, this area received only moderate use.

Local materials were used to construct the campground. Sandstone was used to build retaining walls and fire rings, and Alligator juniper was used to build picnic tables and a pit toilet. In the early 1980's two chemical toilets were added to the campground.

Now the main recreation influence on the District is along the Mogollon Rim because it is readily accessible to a state highway. This shift in recreation use, combined with the historic component has resulted in the remote and rustic character of Chevelon Crossing.

The CCC structures have held up remarkably well, however, the fire rings are in need of replacement and the pit toilet needs to be removed because it is too close to the creek. The chemical units have a look that is out of place in this setting and are failing mechanically.

Replacement of the fire rings and toilets will give Chevelon Crossing a much needed face lift. But, simply replacing them with the cheapest products, or what happens to be in fashion (as chemical toilets were) will not restore the charm of this site. Using materials, colors, and textures that blend with the native rock and vegetation in the canyon will meet that goal.

The present condition of Chevelon Crossing can be looked at as an antique piece of furniture. It may appear a little rough at first, but with some fixing up and some TLC, it can be beautiful and have a lot of personality.

PART II RECOMMENDATIONS

With the evolution of this project came the realization that it is our job as managers not only to provide a range of ROS classes, but to understand what it is people derive from

the experiences those classes provide. An understanding of the benefits gained from particular settings allows us to enhance the aspects of those settings that people find most valuable, and to facilitate the realization of those benefits. Schroeder et al. (1990) express the same philosophy in this statement:

"To provide the best possible sets of opportunities for recreationists, planners and managers of recreation sites should know which attributes and features are the most important in this choice process [trade offs] and how much people are willing to give up on one attribute in order to gain improvement on another. Without this information, managers risk developing sites that will not be used or that will provide far less enjoyment than possible."

The survey discussed in Part I of this chapter was intended to be food for thought and to gain a better comprehension of the kind of information we need to be effective in our management. To acquire this information, I recommend a study that includes a Benefits Based Management (BBM) element. Driver et al. (1991) describe BBM as "based on the ideas that (1) the only reason that public recreation opportunities are provided is because people benefit from them and (2) management will be most responsive, efficient and effective when it explicitly targets specific types of benefit opportunities that will be provided at designated locations."

RECOMMENDED STUDY

Customer Use Survey Techniques for Operations, Management, Evaluation Research (CUSTOMER) is a Forest Service developed and approved survey method that provides statistically sound results and allows for area specific "special issue" questions. The CUSTOMER survey is done by volunteer interviewers trained specifically for this program. The interviewer reads and completes a form using 38 standard questions and up to 10 special issue questions (if applicable). When the interview is over, the interviewer gives out one of four more detailed "mail back"

surveys along with a mail back expense survey, if an expense study has been requested by the District.

Mail back surveys are based on the setting in which the interview took place and include: dispersed, roaded, developed, and water. A separate "winter" mail back survey is used specifically for winter settings and is based on activity rather than setting.

I suggest putting the CUSTOMER survey to use on the Chevelon Ranger District with the following special issue questions on benefits received from outdoor recreation. These questions are a modified version of benefits oriented questions used in the Visitor Study at Ruby Canyon-Black Ridge developed by the Northern Arizona University School of Forestry (Lee 1992).

"People achieve many benefits from their recreation outings, while engaged in your most satisfying activity in the area you spent the most time, please indicate:

A) How desirable each of the following benefits were as reasons for your visit

DESIRABILITY:

- 2 (very undesirable)
- 1 (somewhat undesirable)
- 0 (neither or not applicable)
- +1 (somewhat desirable)
- +2 (very desirable)

B) The extent to which you feel you were able to obtain each of the following benefits

ABLE TO OBTAIN

- 1 (not at all)
- 2 (somewhat able)
- 3 (moderately able)
- 4 (totally able)

- Q1. Bring the family closer together
(Desirability -2 -1 0 +1 +2 / Able to obtain 1 2 3 4)
- Q2. Rest physically
(Desirability -2 -1 0 +1 +2 / Able to obtain 1 2 3 4)
- Q3. Express and nurture personal spiritual values and orientations
(Desirability -2 -1 0 +1 +2 / Able to obtain 1 2 3 4)

- Q4. Rest mentally
(Desirability -2 -1 0 +1 +2 / Able to obtain 1 2 3 4)
- Q5. Reflect on and clarify personal values
(Desirability -2 -1 0 +1 +2 / Able to obtain 1 2 3 4)
- Q6. Get away from the usual demands of life
(Desirability -2 -1 0 +1 +2 / Able to obtain 1 2 3 4)
- Q7. Do something challenging
(Desirability -2 -1 0 +1 +2 / Able to obtain 1 2 3 4)
- Q8. Feel more self-confident
(Desirability -2 -1 0 +1 +2 / Able to obtain 1 2 3 4)
- Q9. Feel at one with other living things
(Desirability -2 -1 0 +1 +2 / Able to obtain 1 2 3 4)
- Q10. Enjoy a place that is special to me
(Desirability -2 -1 0 +1 +2 / Able to obtain 1 2 3 4)"

CHAPTER IV: SUMMARY

A BBM approach takes recreation management one step beyond ROS by defining what socially redeeming values specific experiences provide. We can be more effective in our management and planning efforts by understanding what certain settings can and should offer people in terms of achievable benefits.

The Chevelon Ranger District offers a range of ROS classes that provide an array of potential experiences. Identifying and enhancing the characteristics of specific outdoor settings that can assist in the achievement of benefits is an attainable goal. The CUSTOMER survey program is a tool for identifying the benefits people feel they derive from certain settings or specific locations. Enhancement of setting characteristics is up to us and our imaginations.

The Greek philosopher Epictetus wisely said "nature gave us one tongue and two ears so we could hear twice as much as we speak." Advice from which we can all benefit.

LITERATURE CITED

- Act of August 12, 1968. (P.L. 90-480, 82 Stat. 718, 51 U.S.C. 4151-4154, 4154a, 4155-4157). Architectural Barriers Act.
- Apache-Sitgreaves National Forests. 1987. Land Management Plan
- Driver, B.L., Brown, P.J., and Peterson, G.L. Eds. 1991. Benefits of Leisure. Venture Publishing, Inc. State College, PA 16801.
- Driver, B.L., Brown, P.J., Peterson, G.L., and Bruns, D. 1991. Background Paper No. 1 for Leisure Benefits Application Workshop, Estes Park, Colorado.
- Epictetus. Enchiridion. Translated by George Long. 1991. Prometheus Books. Buffalo, NY 14215.
- Hultsman, J., Cottrell, R., and Zales-Hultsman, W. 1987. Planning Parks for People. Venture Publishing, Inc. State College, PA 16801.
-
- Lee, M.E. 1992. Associate Professor, Recreation Behavior. Northern Arizona University. Visitor Study at Ruby Canyon-Black Ridge.
- Martin, O.C. 1993. Design Narrative; Woods Canyon Lake Recreation Complex. Apache-Sitgreaves National Forests, Chevelon Ranger District. Winslow, AZ 86047.
- Schroeder, H.W. 1993. Ecology of the Heart: Restoring and Sustaining the Human Experience of Ecosystems. Presented at Connections Seminar Series. USDA Forest Service, Washington Office.
- Schroeder, H.W., Dwyer, J.F., Louvier, J.J., and Anderson, D.H. 1990. Monetary and Nonmonetary Trade Offs of Urban Forest Site Attributes in a Logit Model of Recreation Choice. Compilers. Driver, B.L. and Peterson, G.L. USDA Forest Service, Gen. Tech. Report RM-197. US Government Printing Office, Washington, D.C. 20402.
- Strange, R. 1994. Appointment. Arizona Department of Transportation. Personal communication.
- USDA Forest Service. 1992. Design Guide for Accessible Outdoor Recreation (Draft). US Government Printing Office, Washington, D.C. 20402.
- USDA Forest Service. 1986. ROS Book. US Government Printing Office, Washington, D.C. 20402.
- UDSC National Oceanic and Atmospheric Administration, National Weather Service. 1994. Climatological data on Temperature. Phoenix, AZ:

APPENDIX A

Original Recreation Planning for the Bear Canyon Lake Area

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MULTIPLE USE SURVEY AND REPORT
BEAR CANYON LAKE RECREATION COMPOSITE

Stage I

Chevelon Ranger Station
Sitgreaves National Forest

March 21, 1969

Prepared by: Kirk W. Schenck 3/31/69
District Fire/R&L Staff Date

Recommended by: M. Runtz 4/1/69
District Ranger Date

Recommended by: _____
Forest Supervisor Date

Approved by: _____
Regional Forester Date

MULTIPLE USE SURVEY AND REPORT
Stage I
BEAR CANYON LAKE
RECREATION COMPOSITE

I. Introduction

Bear Canyon Lake Recreation composite is presently in existence. The lake was formed in the winter of 1965-1966 upon completion of the dam by the Arizona Game and Fish Department in cooperation with the Forest Service. In 1967 the two parking areas and entrance road were completed by the Forest Service. Included in this construction contract were paving of the parking areas and road, constructing four vault type toilets, and planerling an access trail around the west side of the lake.

The recreation composite is within the Intermediate Management Zone. There is a designated water influence zone around the lake, a Travel Influence Zone along the entrance road and parking areas and Management Unit I-5 for the Little Colorado Splinace along Bear Canyon and north of the dam.

The composite covers approximately 560 acres including 65 surface acres of water and is entirely within sections 20, 29 and 32, T12N, R13E, GASHEN of Coconino County. The area lies in the upper reaches of Bear Canyon, a tributary of Willow Creek in the Little Colorado River drainage.

The topography consists of flat ridges from four to almost thirty chains wide. The drainage walls have 30-70 % slopes with numerous rock outcrops. The soil tends to be shallow on the ridges.

The vegetative type is mixed conifer with scattered stands of ponderosa pine on the drier more exposed site and aspen in the more moist sites. Gambel oak, Oregon grape, *osceolus* and least make up the understory. The predominate vegetation, making up the ground cover, is Arizona fescue and jun grass.

Annual precipitation ranges from 20-25 inches with much of this occurring as rain from July through August and snow from November through March. High winds of 20 to 40 mph frequently occur in April through June. Summer temperatures range from the mid-eighties during the day to the mid-forties at night.

This area is entirely on National Forest land and has not been withdrawn from mineral entry.

4

The present permittee instructions for the Cabin Draw Allotment show that the sheep may not graze that area between the bench road and the lake and are not to be watered at the lake. This area receives light recreation use and grazing of sheep will have little impact on the user until such time as facilities are developed on the east side of the lake.

There is a good possibility that within the next ten years all grazing will be converted from sheep and goats to cattle and horses. When the conversion is made the recreation area will be entirely within the proposed Limestone Allotment. That part of the allotment including this area will be managed to give preference to wildlife over livestock but will not preclude livestock from grazing this area.

D. Soils

A soils survey of the Bear Canyon Watershed was made in 1966 by Truman Anderson, a copy of which is on file at the Cheyenne R-5. The report shows that most of the soil types are of the Golder soils series. These soils are physically suitable to withstand intensive recreation use. They are rated as good for construction purposes and is moderately susceptible to erosion. There is only minor evidence of soil loss and this is mainly the cuts and fills of the new road and at the borrow pit.

A borrow pit is located 1/4 mile northeast of the dam and was opened for the construction of the dam. Material from this pit was later used in the construction of the road and parking areas. In the spring of 1969 the pit will be backfilled and seeded to grass to reduce sedimentation of the stream. The pit is being closed to further use because it contains poor material for road construction.

E. Timber

This area was cut under a selective-cut system in 1959 and again in 1968 under the current Megollon Salvage Sale. The general area has quite a number of dead and dying trees that can be removed by the salvage operation.

The south and east sides of this recreation area contain a small portion of the Christmas tree producing areas of the District. A commercial Christmas tree sale was made on Bear Willow Ridge in 1968. This sale had an impact on the area between Bear Willow Ridge Road and the bench road along the east side of the lake in section 29, T12N, R13E. Approximately 200 trees were removed from this area. Since this area will receive relatively light recreation use in the next five years (through 1974) this area could continue to produce up to 100 trees per year for commercial sales.

F. Water

At the present time the two vault toilets near the lake do not show signs of polluting the lake water. Since these toilets are the sealed vault-type they will be watched closely for any signs of leakage. In the future there will be little need to construct toilets closer than those presently located at the parking areas.

Preliminary surveys of this area indicate that potable water can be obtained by drilling a well. A well has been drilled at Canyon Point Campground, which is 19 miles (by road) to the east and approximately the same distance north of the Mogollon Rim as is Bear Canyon Lake. This tends to substantiate the surveys. Current standards rule out the feasibility of filtering and purifying the lake water for public use.

G. Wildlife

The Little Colorado Splintface Management Unit, I-5, starts at the dam and runs north along Bear Canyon. The splintface is considered to be a "rare and endangered species" of fish. Maintaining the present water quality in Bear Canyon is of major importance in preventing this rare non-sport fish from disappearing.

The Arizona Game and Fish Department has abundantly stocked the lake with cutthroat, Arizona native trout and Montana grayling. The current fish growth has been fair with the average attained size of around 10 inches. This is due to a lack of basic nutrients in the water and the AGFD does not anticipate that these nutrients will increase in the future (See Bear Canyon Lake Fishery Management Plan in the Appendix).

H. Fire

Old slash from the Promontory and Alder Scales is moderately heavy in this area. A clean-up program along the entrance road and around the parking areas was started in August of 1968 and completed by August of 1969. There is a further need to execute a hazard reduction program around the entire lake to reduce fire damage should a fire start in the area. Because of the high fire hazard, the increasing risk from fisherman and the prevailing winds being from the southwest much of the use of the area is being confined to the lake.

I. Land Uses

The dam is under special use permit to the Arizona Game and Fish Department. The Department is responsible for the maintenance of the earth-fill dam. The spillway has cut into the native rock strata and due to the type of rock has eroded quite badly. In the fall of 1967 the AGFD grouted the rock in the spillway and apparently corrected the problem.

In the fall of 1966 and attempt was made to have this area withdrawn from mineral entry. Due to an acreage limitation it was not done at that time. No further requests have been made.

J. Transportation

The present access to the lake is from the west on Bear-Beaver Ridge Road. Access to the lake will be over trails from the parking areas to the shore line and along the west side of the lake. Access from the east side is along Bear-Willow Ridge Road but is limited this time. There is a road to the dam from Bear-Willow Ridge Road, via the borrow pit previously mentioned, for access to maintain the dam, toilets and police the shore line. This road is blocked with post and chain between the dam and borrow pit.

Access to the south end of the lake is over the Tower Ridge Road. This road is blocked with post and cable and drained with rolling dips and is used for administration only.

There is a "bench" road along the east side of the lake but outside of the water influence zone. Access along this road is presently controlled to some extent with post and cable road blocks and maintained for fire and administration purposes only.

K. Other

Public safety is a major concern in this area as it is an area of people concentration. Lightning occurrence is high in this area in July and August with the resultant hazard to people on the lake or on ridge tops during lightning storms.

The lake is hazardous for swimming in that the water is cold and submerged stumps, logs and rocks present a hazard to the people using the lake.

Electric power for use in pumping water is available from the 12.5 KV line located one mile north of the lake.

III. Recommendations

1. Recommend that this survey and report be approved.
2. Designate recreation composite boundary as proposed and post on the ground.
3. To the extent possible, all improvements constructed within the water influence zone shall be blended in with surrounding vegetation and terrain.
4. All soil disturbance shall be promptly seeded with soil holding grass species.

5. After recreation area boundary is posted in sections 20 and 29 T12N, R13E of the Willow Creek Allotment, have sheep routed around the west side of the recreation area.

6. In that portion of sections 20 and 29, T12N, R13E on the Cabin Draw Allotment and within the recreation composite, grazing shall be limited with bedding not permitted.

7. Do not allow sheep to water at lake.

8. Upon completion of the conversion of the allotments to cattle and horses, fence the recreation composite boundary.

9. Include planting of tree species in the rehabilitation of borrow pit.

10. After 1974 do not permit commercial Christmas tree sales west of Bear-Willow Ridge Road.

11. Until 1974 restrict to no more than 100 Christmas trees per year for removal from the area west of Bear-Willow Ridge Road and east of the bench road.

12. Permit no cutting of Christmas trees west of the bench road.

13. Construct no additional toilets along shore line.

14. Include composite in water and sanitation survey and planning project for the Rim Complex.

15. Develop potable water source and distribution system for public use.

16. Provide treatment measures to correct erosion occurring on cuts and fills of new road in the summer of 1969 and on all future development projects.

17. Recognize need to protect spindace habitat.

18. Until recreation use dictates the additional need, confine access and improvements to Bear-Beaver Ridge (west side).

19. Sign area during lightning season to inform public of hazards and the recommended precautions to take during lightning storms.

20. Sign lakeshore to prohibit swimming.

21. Re-initiate request for withdrawal of composite from mineral entry.

22. Remove hazard trees for public safety.

23. Clean-up all slash from salvage operations within composite area.

24. Develop campground to provide for public needs in lieu of current "throw down" area.

25. Extend hazard reduction project to include buffer around potential and developed sites and on east side of lake.

26. Avoid activities that will endanger the Little Colorado spindace.

27. Maintain the bench roads and Tower Ridge Road for administration and fire control purposes only.

II. Evaluation of the Effect of Recreation Area on National Forest Resources, Uses and Activities

A. Natural Beauty

The lake is being managed in a "semi-wilderness" condition where access to the lake shore is by trail. Fishing tackle is restricted to artificial flies and lures. Except for the presence of the toilet at the east end of the dam, the access road to the dam and the dam itself, very little of the natural beauty of the lake has been affected. The entrance road and parking areas are outside of the water influence zone and does not encroach upon the natural beauty of the lake.

An access trail from each of the parking areas and along the west side of the lake is to be constructed in the summer of FY 70. Short portions of the trail will be visible from the east side of the lake. The trail location will provide several scenic views of the lake.

B. Outdoor Recreation

Fishing is the main attraction for recreationists to this area. It is unique in that it is the only lake of the Rim Lakes Complex where artificial lures are required and road access is at least $1/4$ mile from the lake. This tends to give the user a "wilderness" type of experience.

At the present time the improvements within the area consist of 1.2 miles of paved road and parking areas on the west side of the lake. Sanitation is provided at the parking areas, the east end of the dam and at the south end of the lake. Access trails from the parking areas to the shore line and along the west side of the lake are to be constructed under the current construction program. Presently camping is limited to "throw-down" use. This use is occurring in the inventoried camp and picnic areas along the entrance road. Development of these areas is needed as soon as possible to protect the site and serve the public need. The closest developed campground is at Woods Canyon Lake (13 miles away).

C. Range

Bear Canyon is the North-South boundary between Willow Creek S&D Allotment on the west and the Cabin Draw S&D Allotment on the east. The 1968 permittee instructions for the Willow Creek Allotment call for the sheep to be routed around the west side of the lake by crossing through the southwest $1/4$ of section 29 and then north along the west side of Bear-Beaver Ridge Road. There is no bedding in the southwest $1/4$ of section 29 and the sheep do not water at the lake.

APPENDIX B

Environmental Assessment
for
Rim Lakes Management Plan

ENVIROMENTAL ASSESSMENT
FOR
RIM LAKES MANAGEMENT PLAN

APACHE-SITGREAVES NATIONAL FORESTS
COCONINO COUNTY
CHEVELON AND HEBER RANGER DISTRICTS

Prepared by:

A handwritten signature in dark ink, appearing to be "H. H. D.", is written over a horizontal line.

ENVIROMENTAL ASSESSMENT RIM LAKES MANAGEMENT PLAN

INTRODUCTION

Overuse of the Mogollon Rim Area in the Woods Canyon Lake, Willow Springs Lake, and Al Fulton Point area has necessitated the development of a Management Plan for these areas along with the surrounding lands. The Rim Lakes Management Plan will include portions of the Chevelon and Heber Ranger Districts and will encompass an area along the Rim from Willow Springs Lake to the Apache/Sitgreaves-Coconino National Forests Boundary. An environmental analysis was conducted during several meetings in January, February, March and April 1987. At these meetings resource data necessary for analysis were brought together. Critical Issues, Concerns, and Opportunities (I. C. O.'s) relating to the management area, were listed, management objectives developed and alternatives formulated. The purpose of this assessment report is to summarize and document the thoughts and conclusions of the Interdisciplinary team (I.D. Team).

NEED FOR THE PROPOSAL

The planning area along the Mogollon Rim is highly attractive to Forest Visitors because of the unique characteristics it has to offer. Geographically the Rim's escarpment affords people the opportunity to view hundreds of thousands of acres of forested, mountainous terrian from above the Tonto Basin. The Mogollon Rim is easily accessible from the Phoenix area providing much needed climatic relief from the Valley's scorching summer temperatures which often exceed 110 degrees farenheit. Lakes and streams are present along the Rim thus attracting not only people, but many forms of wildlife as well.

There are a few developed campgrounds within the planning area but the demand for them exceeded their capacity almost as soon as they were built in the late 50's to mid 60's. Consequently, dispersed recreation use has occurred heavily in areas near the lakes and in the Rim planning area. With the advent of the all-terrain cycles and off-road vehicles in the early 70's new trails and travelways further impacted and encroached into areas where once there were no recreational vehicles. After logging activity many newly built roads and skid trails were either left open or inadequately closed. Construction of major powerlines further contributed to the accessibility along the rim. The relatively flat topography makes closing of any roads in this area extremely difficult.

The analysis area has been the subject of numerous studies dating back to 1964. The latest of these studies was conducted in 1980 by Arthur Matthias (A/S assistant recreation staff) as a requirement for the Clemson University Recreation Short Course. The essence of his study was to estimate the optimum carrying capacity of the Woods Canyon Lake Composite which extends from Hole-In-Ground on the west to Al Fulton Point on the east, and to make recommendations for design of facilities and/or management of the area. Many of today's thoughts and concepts were discussed in Matthias' paper.

NATURE OF THE PROPOSAL

To provide a continuing variety of recreation opportunities that are compatible with the physical and natural setting.

NATURE OF THE DECISION TO BE MADE

Select an alternative which provides a variety of recreation opportunities within a designated area that harmonizes with the values that attract people to the Rim area. These values are:

- A. Unique geographic and biotic values. (Highly scenic)
- B. Climatic relief.
- C. Water based recreation, primarily cold water fisheries.

ISSUES CONCERNS AND OPPORTUNITIES

With the nature of the Proposal and the Nature of Decision to be made as defined above, the Interdisciplinary members identified concerns and opportunities which are listed below:

A. CONCERNS

There is concern that the Rim Lakes Management Plan if implemented could:

1. Negatively effect big game habitat through human infringement of wildlife areas; and degrading wildlife habitat by the construction of facilities, placement of facilities, and designation of motorized activity areas.
2. Not have adequate law enforcement funding to properly implement the plan.
3. Draw additional visitors into Woods Canyon, Willow Springs Canyon, and Chevelon Canyon which could impact their primitive attributes.
4. Not be financially responsive to the entire scope of the situation thereby any work able to be accomplished would be only piecemeal and a waste of tax dollars.
5. Create safety problems along the major travel routes (300 Road, 105 Road, Highway 260).
6. Provide for ORV activities which may not be appropriate for this area.
7. Not be consistant with ORV management on adjacent National Forest lands on the Coconino and Tonto Forests.

8. Cause dust problems due to heavy traffic on the major travel routes and the designation of ORV areas.
9. Exceed the current capacity of the area therefore causing more acreage to be classified as ROS class Rural. This could, in combination with other unassociated projects fail to comply with LMP ROS guidelines.
10. Exceed the correct capacity of the area, further reducing the quality of the recreational experience.
11. Adversely effect the water quality of the affected lakes (Woods Canyon Lake, Willow Springs Lake, Bear Canyon Lake).
12. Displace some recreation users. Also some users will be displaced within the area and some will be displaced to other N.F. areas.
13. Cause overuse of Larson Ridge which would have adverse effects on wildlife.
14. Reduce timber yields due to the primary emphasis being placed on recreation for a relatively large area.
15. Increase use at Willow Springs Lake which could increase fishing pressure to levels that the Arizona Game and Fish Dept. cannot be responsive to.
16. Not providing additional recreation use in a potentially available water based setting is not responsive to SCORP(State Comprehensive Outdoor Recreation Plan) objectives.
17. Indiscriminate use is damaging/killing vegetation which reduces the visual quality and increases the chance of unacceptable soil loss or watershed conditions.
18. Heavy day use of ideal locations along the Rim will cause traffic problems and will reduce the quality of the day use recreational experience.

B. OPPORTUNITIES

Implementation of a Rim/Lakes management plan can provide an opportunity to :

1. Improve effective wildlife habitat by controlling and concentrating recreation use.
2. Expand developed facilities which would create a concessionaire opportunity.
3. Have a concessionaire operation that would save O&M dollars, which would become available for law enforcement or administrative efforts to fully implement the plan.

4. Protect the primitive attributes of Woods Canyon, Willow Springs Canyon, and Chevelon Canyon which have the highest semiprimitive recreation values on the Sitgreaves N.F.
5. Provide higher quality recreation experience.
6. Allow day users equal opportunities to enjoy the more scenic Vista Points along the Rim.
7. Enhance the natural setting at certain locations within the management area.
8. Resolve safety problems associated with uncontrolled use along Forest roads 300 and 105.
9. Resolve conflicts between ORV activities and noncompatible uses.
10. Reduce noise pollution by separating incompatible uses and controlling use.
11. Blend the management of the General Crook Trail with other facilities/activities in the area.
12. Generate additional funds to the treasury by expanding the developed campgrounds that are fee areas.
13. Effectively reduce road densities within the planning unit.
14. Provide an opportunity to inform and educate the public on land use programs, policies and camping ethics.
15. Expand the number of trails within the area and connect with adjacent trails.
16. Enhance the semiprimitive recreation opportunities.
17. Allow camping within a reasonable walking distance from Willow Springs Lake.
18. Provide a VIS center at Al Fulton Point adjacent to State Highway 260.
19. Reduce fire risk by designating areas of concentrated use.

MANAGEMENT PLAN OBJECTIVES

After identifying critical I.C.O.'s the I.D. team developed a list of objectives that were responsive to those I.C.O.'s. They are:

1. Meet all foreground retention visual quality objectives.
(Measure by the number of acres that meet established definition)

2. Reestablish ground vegetation adjacent to paved portion of 300 road, 105 road, and the concentrated use areas on the west side of the 149 road, and the 171 road. (Measure by number of acres with percent of ground cover equal to or greater than similar unaffected areas)
3. Maintain a broad spectrum of recreation opportunities, within the guidelines of the Forest Land Management Plan. (Measure by a comparison of current use vs planned management guidelines)
4. Facilities are to meet basic needs for the type of recreation activities that are compatible with the overall management of the area; located in areas to increase the utilization of the Rim edge with less user conflict and providing for a wider spectrum of opportunities; built of sufficient size to be efficiently operated and maintained or incorporated into a concessionaire operation. (Measure adequacy of facilities through comparison with types of use that exist (tent camping, trailer/R/V camping, and user separation). Measure user conflict resolutions by distance of overnight use from the rim edge as well as density of that use. Measure O.&M. efficiency through comparison of annual costs. Measure feasibility of concessionaire operation using regional guidelines based on number of units, current fees, and occupancy rate.)
5. Substantially resolve existing conflicts, as well as prevent future conflicts (that can be perceived, based on current trends) between off road motorized activities and other non-motorized recreation activities. (Measure by assessing the ability to adequately, physically separate the uses by design as well as ability to enforce (assuming current work force).)
6. Maintain current big game wildlife habitat capability in the area. (Measure by utilizing the wildlife model with elk and turkey as indicator species)
7. Reduce road densities to LMP standards and guidelines of two miles of road per section.

MANAGEMENT PLAN ALTERNATIVES

A pure recreation plan was presented to the I.D. team, from which alternatives could be developed. The pure recreation plan was concerned only with the management of recreational opportunities without regard to any other resources or objectives. The I.D. team then modified this basic plan to develop alternatives that would give greater emphasis to big game wildlife habitat maintenance, as well as the resolution of recreation user and management conflicts. The following three alternatives were listed for evaluation:

1. No action (Do nothing)
2. Alternative that would for the most part meet all objectives and provide for off-road vehicle use in designated areas.
3. Alternative that would for the most part meet all objectives and not allow any off-road vehicle use within the management plan boundaries.

EVALUATION OF ALTERNATIVES

Alternatives were evaluated according to their accomplishment of management plan objectives. The Apache/Sitgreaves National Forests Land Management Plan includes some planned improvements and general direction for the Rim Lakes Management Plan area. An evaluation was also made to insure that we were complying with the Forests Land Management Plan. The chart below displays the evaluation of the alternatives to the objectives.

<u>Management Plan Objectives</u>	<u>Alternative #1</u>	<u>Alternative #2</u>	<u>Alternative #3</u>
1. Visual Quality	-3	+2	+2
2. Reestablish Ground Vegetation	-3	+2	+3
3. Recreation Opportunities	0	0	0
4. Facility design and location	-2	+2	+2
5. Resolve Conflicts	-3	+2	+3
6. Wildlife Habitat	-2	+1	+2
7. Reduce road density	-2	-1	+2

Rating based on a scale of -3 to +3

- +3 = Fully meets objective
- +2 = Partially meets objective
- +1 = Minimally meets objective
- 0 = No effect from present
- 1 = Minimally conflicts with objective
- 2 = Partially conflicts with objective
- 3 = Directly conflicts with objective

CONCLUSION

The I.D. team concludes that Alternative #3 responds best to the objectives. This alternative eliminates any O.R.V. use within the Rim/Lakes Management Plan area. Therefore, it should be noted that this type use will be provided for, somewhere outside of this planning area.

Alternative #3 as agreed upon will consist of:

1. Expansion of Aspen Campground by approximately 80 units.
2. Expansion of Canyon Point Campground by approximately 50 units.
3. Construction of 4 campsites called "Cul-De-Sacs". (35 Units per Cul-De-Sac, 140 units total)
4. Development of the General Crook National Recreation Trail with 1 to 5 trailheads.
5. Closure of portions of the Rim to overnight use to better utilize the Rim for day-use activities.
6. Closure of the area to motorized use except on designated transportation system roads.
7. The general area along the Rim from the Coconino National Forest Boundary east to Canyon Point Campground, including Larson Ridge and the Bear Canyon Lake area; camping will be in developed facilities or identified remote sites only.

PERSONS CONSULTED

The I.D. Team consisted of various Forest Service resource specialists and representatives of the Arizona Game and Fish Dept. The I.D. Team was composed of the following members:

1. Mel Wilhelm--Forest Service, Wildlife Biologist
2. Larry Lucas--Forest Service, Assistant Forest Rec. and Lands Staff
3. Barrett Edgar--Az. Game and Fish Dept, Wildlife Manager
4. Juan Gomez--Forest Service, Sitgreaves Zone Engineer
5. Mike Sugaski--Forest Service, Heber District Rec. and Lands Staff
6. Norris Dodd--Az Game and Fish Dept, Habitat Specialist
7. Walter Scott--Forest Service, Chevelon District Rec. and Lands Staff
8. Ken Clay--Az Game and Fish Dept, Wildlife Manager

In addition to the I.D. Team members, interested publics were contacted and informed of the proposed Rim Lakes Management Plan. The interested publics were informed by the implementation of a Public Involvement Plan. This plan involved News Releases to AP, State and Local news medias, Radio and T.V. coverage, sending of letters to all people and organizations that expressed interest in key parts of the Forest Land Management Plan that related to the management of the Rim, and also posting information of the planning efforts on various bulletin boards within the planning area.

*Rim
Plan*

DECISION NOTICE
AND
FINDING OF NO SIGNIFICANT IMPACT

Chevelon/Heber Ranger Districts
Apache-Sitgreaves National Forests
Coconino County, Arizona

The Rim Lakes Management Plan Environmental Assessment documents the analysis of three alternatives that effect the management of a portion of the Mogollon Rim and adjacent areas from the Coconino National Forest Boundary to Canyon Point Campground. The environmental assessment is attached.

Based on the analysis, it is my decision to adopt alternative #3. This alternative is selected because it best provides for:

1. Meeting foreground retention visual quality objectives.
2. Reestablishing ground vegetation adjacent to paved portions of the 300 road, 105 road and the concentrated use areas on the west side of the 149 road and the 171 road.
3. Maintaining a broad spectrum of recreation opportunities.
4. Facilities that meet the basic needs for the type of recreation activities that are compatible with the overall management of the area; located in areas to increase the utilization of the Rim edge with less user conflict for a wider spectrum of opportunities; built of sufficient size to be efficiently operated and maintained or incorporated into a concessionaire operation.
5. Substantially resolves existing conflicts, as well as prevent future conflicts (that can be perceived based on current trends) between off road motorized activities and other nonmotorized recreation activities.
6. Maintains current big game wildlife habitat capacity.
7. Reducing road densities toward Land Management Plan Standards and Guidelines.

Alternatives considered were:

Alternative 1. No Action. Continue to allow unregulated recreation use outside of developed facilities.

Alternative 2. For the most part, meet all objectives and provide for off-road vehicle use in designated areas, within this planning area.

Alternative 3. For the most part, meet all objectives and not allow any off-road vehicle use within the management plan boundaries.

Alternative 1, as proposed in the environmental assessment, was not selected because it does not conform with the management guidelines in the Forest Land Management Plan, nor does it do anything to protect the natural setting from further degradation. Further degradation will affect big game habitat, as well as ultimately the recreation experience levels that exist today.

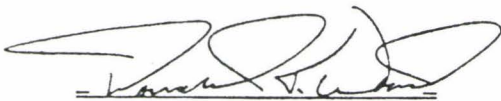
Alternative 2, as proposed in the environmental assessment, was not selected because it does not meet the management objectives as completely as Alternative #3. More specifically #2 does not reestablish ground cover, resolve the user conflicts, reduce road densities and does not maintain the big game wildlife habitat capability as well as the preferred Alternative.

I have determined through the environmental assessment that this is not a major Federal Action that would significantly affect the quality of the human environment; therefore, an environmental impact statement is not needed. This determination is based on the following factors:

1. There are minimal irreversible resource commitments and irretrievable losses of timber production.
2. There are no significant cumulative effects.
3. The physical and biological effects are limited to the area of planned activity.
4. No known threatened or endangered wildlife are affected.
5. This project is within the scope of the Multiple Use Guide for the Apache-Sitgreaves National Forests, 1974, and the Environmental Impact Statement for the Apache-Sitgreaves National Forests Plan, 1987.

Implementation of this decision may occur immediately.

This decision is subject to appeal pursuant to 36 CFR 211.18.



DONALD K. WOOD
District Ranger
Chevelon Ranger District

11-30-87
Date

APPENDIX C

Recreation Opportunity Spectrum (ROS)
Classification Guidelines

ROS Experience Characterization*

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
Extremely high probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility, and self-reliance through the application of woodsman and outdoor skills in an environment that offers a high degree of challenge and risk	High, but not extremely high, probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility, and self-reliance through the application of woodsman and outdoor skills in an environment that offers challenge and risk.	Moderate probability of experiencing isolation from the sights and sounds of humans, independence, closeness to nature, tranquility, and self-reliance through the application of woodsman and outdoor skills in an environment that offers challenge and risk. Opportunity to have a high degree of interaction with the natural environment. Opportunity to use motorized equipment while in the area	About equal probability to experience affiliation with other user groups and for isolation from sights and sound of humans. Opportunity to have a high degree of interaction with the natural environment. Challenge and risk opportunities associated with more primitive type of recreation are not very important. Practice and testing of outdoor skills might be important. Opportunities for both motorized and non-motorized forms of recreation are possible	Probability for experiencing affiliation with individuals and groups is prevalent, as is the convenience of sites and opportunities. These factors are generally more important than the setting of the physical environment. Opportunities for wilderness challenges, risk-taking, and testing of outdoor skills are generally unimportant except for specific activities like downhill skiing, for which challenge and risk taking are important elements	Probability for experiencing affiliation with individuals and groups is prevalent, as is the convenience of sites and opportunities. Experiencing natural environments, having challenges and risks afforded by the natural environment, and the use of outdoor skills are relatively unimportant. Opportunities for competitive and spectator sports and for passive uses of highly human-influenced parks and open spaces are common

*These experiences are highly probable outcomes of participating in recreation activities in specific recreation settings.

Remoteness Criteria*

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
An area designated at least 3 miles from all roads, railroads or trails with motorized use	An area designated at least ½-mile but not further than 3 miles from all roads, railroads or trails with motorized use; can include the existence of primitive roads and trails if usually closed to motorized use.	An area designated within ½-mile of primitive roads or trails used by motor vehicles; but not closer than ½-mile from better than primitive roads.	An area designated within ½-mile from better than primitive roads, and railroads.	No distance criteria.	No distance criteria.

*The criteria can be modified to conform to natural barriers and screening, or other relevant features of local topographic relief and vegetative cover. This fits the criteria to the actual Forest landscape.

Size Criteria

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
5,000 acres*	2,600 acres**	2,500 acres	No size criteria.	No size criteria.	No size criteria.

*May be smaller if contiguous to Semi-Primitive Nonmotorized Class.

**May be smaller if contiguous to Primitive Class.

Capacity Coefficient Ranges* (in PAOT/Acre)

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
High: .025 Low: .002	.083 .008	.083 .008	2.500 .083	7.500 .830	N/A N/A

*Specific ranges must be developed to meet Regional or Forest Conditions.

Evidence of Humans Criteria

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
Setting is essentially an unmodified natural environment. Evidence of humans would be unnoticed by an observer wandering through the area.	Natural [*] setting may have subtle modifications that would be noticed but not draw the attention of an observer wandering through the area.	Natural [*] setting may have moderately dominant alterations but would not draw the attention of motorized observers on trails and primitive roads within the area.	Natural [*] setting may have modifications which range from being easily noticed to strongly dominant to observers within the area. However from sensitive ^{**} travel routes and use areas these alterations would remain unnoticed or visually subordinate.	Natural [*] setting is culturally modified to the point that it is dominant to the sensitive ^{**} travel route observer. May include pastoral, agricultural, intensively managed wildland resource landscapes, or utility corridors. Pedestrian or other slow moving observers are constantly within view of culturally changed landscape.	Setting is strongly structure dominated. Natural or natural-appearing elements may play an important role but be visually subordinate. Pedestrian and other slow moving observers are constantly within view of artificial enclosure of spaces.
Evidence of trails is acceptable, but should not exceed standard to carry expected use.	Little or no evidence of primitive roads and the motorized use of trails and primitive roads.	Strong evidence of primitive roads and the motorized use of trails and primitive roads.	There is strong evidence of designed roads and/or highways.	There is strong evidence of designed roads and/or highways.	There is strong evidence of designed roads and/or highways and streets.
Structures are extremely rare.	Structures are rare and isolated.	Structures are rare and isolated.	Structures are generally scattered, remaining visually subordinate or unnoticed to the sensitive ^{**} travel route observer. Structures may include power lines, microwave installations and so on.	Structures are readily apparent and may range from scattered to small dominant clusters including power lines, microwave installations, local ski areas, minor resorts and recreation sites.	Structures and structure complexes are dominant, and may include major resorts and marinas, national and regional ski areas, towns, industrial sites, condominiums or second home developments.

^{*}In many southern and eastern forests what appears to be natural landscapes may in actuality have been strongly influenced by humans. The term natural-appearing may be more appropriate in these cases.

^{**}Sensitivity level 1 and 2 travel routes from Visual Management System USDA Handbook 461.

Social Setting Criteria*

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
Usually less than 6 parties per day encountered on trails and less than 3 parties visible at campsites	Usually 6 - 15 parties per day encountered on trails and 6 or less visible at campsites.	Low to moderate contact frequency.	Frequency of contact is: Moderate to High on roads. Low to Moderate on trails and away from roads	Frequency of contact is: Moderate to High in developed sites, on roads and trails, and water surfaces. Moderate away from developed sites.	Large numbers of users onsite and in nearby areas.

^{*}These criteria apply during the typical recreation use season. Peak days may exceed these limits.

^{**}Specific numbers must be developed to meet regional or local conditions.

Managerial Setting Criteria

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural	Rural	Urban
On-site regimentation is low with controls [*] primarily off-site.	On-site regimentation and controls [*] present but subtle.	On-site regimentation and controls [*] present but subtle.	On-site regimentation and controls [*] are noticeable, but harmonize with the natural environment.	Regimentation and controls [*] obvious and numerous, largely in harmony with the man-made environment.	Regimentation and controls [*] obvious and numerous.

^{*}Controls can be physical (such as barriers) or regulatory (such as permits).

APPENDIX D

Preliminary Survey Components

SURVEY RESPONSE FORM

OBJECTIVE: To create a broad-range outdoor recreation plan for the Chevelon Ranger District.

1. Survey location
2. How often do you visit this area?
3. What do you like about this area and why?
4. What do you not like about this area and why?
5. How do you feel about the people you have encountered in this area?
6. Do you go to other places on the Chevelon Ranger District?

If YES, where and why?

If you would like information about Forest Service activities on the Chevelon Ranger District please put your name and address at the bottom of this page.

PHOTO INDEX

Take pictures of the things you like and do not like about your visit. Please indicate whether or not you like the shot you take next to the number on this page corresponding to the number on the film role. Example: for the first picture you take write "good" if you like it or "bad" if you do not -- feel free to elaborate.

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APPENDIX E

Survey Tally Sheets

Survey location: Woods Canyon Lake Complex

Surveys completed: 25

Visitor frequency:

- 15 = 2 or fewer times per year
- 10 = 3 or more times per year

Reasons for liking the area:

- 15 = cool weather
- 5 = pine trees
- 1 = "wilderness"
- 3 = interpretive program
- 5 = location (proximity to residence)
- 2 = "friendly"
- 9 = convenience of facilities (water, restrooms, store, dump station)
- 1 = spacious campgrounds
- 3 = closeness to the lake
- 5 = beauty of the area
- 5 = lake/fishing
- 2 = camping
- 6 = clean, well maintained area
- 1 = away from the city
- 5 = quiet
- 1 = rangers and hosts
- 1 = wildlife

Reasons for not liking the area:

- 4 = crowds
- 2 = bad fishing
- 1 = need more ranger programs
- 5 = "no comment"
- 3 = not enough water spigots
- 2 = no flush toilets
- 2 = not easy to get a site
- 1 = rocky camp site
- 2 = not enough sites
- 1 = no grass
- 1 = rude host
- 2 = poor drainage in sites
- 1 = trail maintenance needed
- 1 = loud neighbors
- 1 = sites too close together

Comments on other people in the area:

- 18 = positive comments
- 3 = negative comments
- 1 = indifferent
- 3 = both positive and negative comments

Visit other areas of the District:

- 16 - yes
- 9 = no

Survey location: Designated Dispersed Campsites

Surveys completed: 4

Visitor frequency:

- 1 = first time
- 3 = 1 or more times per year

Reasons for liking the area:

- 2 = courteous rangers
- 2 = clean area
- 1 = wildlife
- 1 = has a restroom
- 2 = view from the Rim
- 2 = no fee
- 1 = sense of "wilderness"
- 1 = trees
- 1 = near the lakes on the Rim
- 1 = cool weather

Reasons for not liking the area:

- 1 = crowds in the Rim area
- 2 = dogs (unleashed and mess)
- 2 = shooting in the area
- 1 = too regulated
- 1 = too few designated sites
- 1 = loud neighbors
- 1 = no drinking water
- 1 = no restrooms

Comments on other people in the area:

- 3 = positive comments
- 1 = both positive and negative comments

Visit other areas of the District:

- 2 - yes
- 2 = no

Survey location: Bear Canyon Area

Surveys completed: 11

Visitor frequency:

4 = 1 or fewer times per year

7 = 1 or more times per year

Reasons for liking the area:

2 = cool weather

3 = quiet

6 = clean area

2 = scenery

3 = lake

3 = remoteness

1 = camping

2 = no fee

2 = space to camp

3 = wildlife

1 = trees

2 = nice rangers

Reasons for not liking the area:

2 = "no comment"

1 = nothing

4 = shooting in the area

1 = increasing # of people

1 = noisy people

1 = hike to the lake

4 = trash

2 = fishing regulations

1 = ATV's

1 = dogs (unleashed/mess)

1 = bad roads

Comments on other people in the area:

2 = no comment

5 = positive comments

4 = both positive and negative comments

Visit other areas of the District:

6 = yes

4 = no

1 = no comment

Survey location: Chevelon Lake (south end - 180 road)

Surveys completed: 12

Visitor frequency:

- 11 = 2 or fewer times per year
- 1 = 3 or more times per year

Reasons for liking the area:

- 1 = few boats
- 2 = exercise
- 3 = fishing area
- 2 = trees
- 10 = quiet/solitude
- 1 = no motorhomes
- 1 = no ATV's
- 3 = scenery/beauty
- 3 = wildlife
- 1 = "untouched environment"
- 3 = lake
- 1 = open
- 1 = hard to get to
- 1 = clean

Reasons for not liking the area:

- 2 = "no comment"
- 2 = hike to lake
- 3 = nothing
- 1 = "deforestation" along road
- 1 = not the prettiest part of the lake
- 1 = hike with canoe
- 1 = people not obeying fishing regulations

Comments on other people in the area:

- 12 = positive comments

Visit other areas of the District:

- 7 = yes
- 5 = no

Survey location: Chevelon Lake (north end - 169B road)

Surveys completed: 4

Visitor frequency:

4 = 1 or more times per year

Reasons for liking the area:

3 = quiet
1 = wildlife
1 = remoteness
2 = cool weather
1 = canoeing
2 = trees
1 = clean air

Reasons for not liking the area:

3 = bad roads
1 = Holiday crowds
1 = snakes

Comments on other people in the area:

4 = positive comments

Visit other areas of the District:

2 = yes
2 = no

Survey location: Chevelon Crossing

Surveys completed: 3

Visitor frequency:

- 2 = 1 or fewer times per year
- 1 = 3 or more times per year

Reasons for liking the area:

- 1 = wildlife
- 1 = undeveloped
- 3 = quiet
- 1 = cool weather
- 1 = next to stream
- 1 = clean
- 1 = no traffic

Reasons for not liking the area:

- 1 = shooting
- 1 = nothing
- 1 = lack of restrooms
- 1 = no comment

Comments on other people in the area:

- 2 = positive comments
- 1 = both positive and negative

Visit other areas of the District:

- 1 = yes
- 2 = no